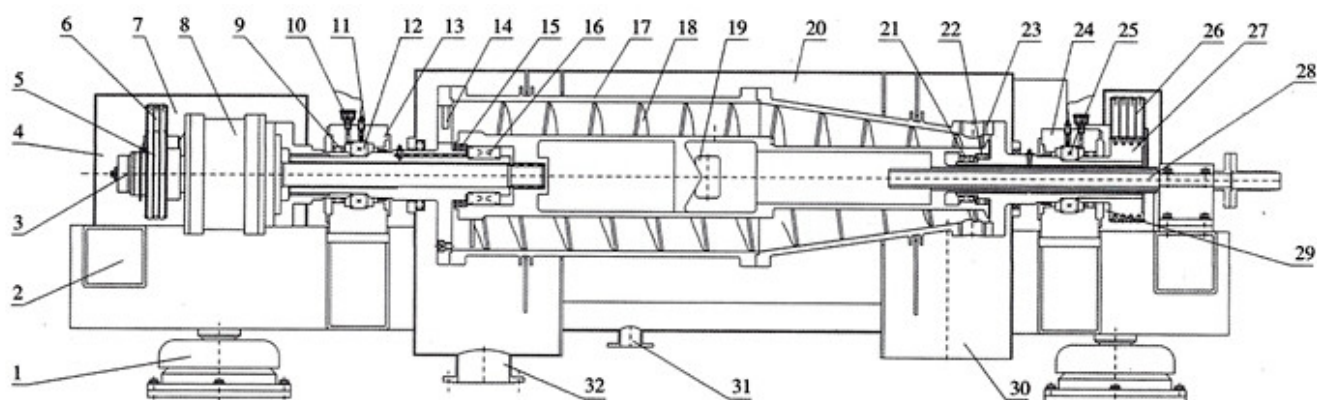


Study on tunnel vegetable hot air dehydration dryer

At present, dehydrated vegetables have formed a large market, and most areas in China are still artificially aired, which is difficult to meet the requirements of the international market.

[Microwave drying machinery](#) and equipment dehydration methods of fruit and vegetable are divided into two types: normal pressure and negative pressure.

[Drying and dewatering equipment](#)



1. 减振器	shock absorber	9. 后主轴承密封	rear bearing seal	17. 转鼓组件	drum components	25. 前主轴承	front bearing
2. 机座	machine base	10. 注油杯	pours the lubricate cap	18. 螺旋推料器	screw push feeder	26. 主电机主动轮	action wheel
3. 扭矩保护装置	torque protection system	11. 温度传感器	Temperature sensor	19. 布料器	distributor	27. 主电机从动轮	driven wheel
4. 皮带保护罩	belt guard	12. 后主轴承	emperor bearing	20. 外壳	shell	28. 进料管	feed pipe
5. 从差速带轮	subordinate differential pulley	13. 后轴承座	emperor bearing base	21. 螺旋前轴承	screw front bearing	29. 主电动机	main motor
6. 主差速带轮	main differential pulley	14. 溢流板	overflow plate	22. 螺旋前轴承密封	screw front bearing seal	30. 滤渣出口	filter residue outlet
7. 差速电机	differential motor	15. 螺旋后轴承密封	screw rear bearing seal	23. 排渣耐磨套	filter wear sleeve	31. 玻璃棉	wool

Atmospheric hot air drying is still the most common method for vegetable dehydration, but there are various new drying methods (vacuum freeze drying, vacuum frying, nitrogen drying, sonic drying, heat pump drying, microwave drying, far infrared drying, vacuum drying). The development trend of superheated steam drying, solar drying, vibrating fluidized bed drying, etc., has certain applications. The use of hot air dehydration principle to dry vegetables is more suitable for China's national conditions.

Since the moisture content of vegetables is very high, the proportion of heat taken out by the product after drying is small, so counter-flow drying is adopted, that is, the direction of movement of the material is opposite to the direction of hot air movement. The hot air is discharged from the hot blast stove, and is contacted with the material through the splitter and the mixing chamber, and is discharged through the entire tunnel through the exhaust vent.

During the period, if the hot air temperature is too high, the chiller is automatically turned on to cool the air, and an audible and visual alarm signal is emitted at the same time. The material of the vehicle is transported by the transfer vehicle on the feed rail at the feeding door, and is manually pushed into the tunnel from the side. Then, the pusher pushes the longitudinal row of the skip to the parking door in the longitudinal direction of the discharge door. One car is transported to the discharge door, pulled out to the transfer car on the discharge rail, transported to the intermediate rail, and discharged and sorted.

Dehydrated vegetables are generally required to exhibit their natural color and uniformity. Due to the difference in processing technology, it is prone to unstable color, that is, "browning" phenomenon.